

## **BARIUM TITANATE FILM SYNTHESIZING PROCESS**

### **ABSTRACT OF THE DISCLOSURE**

A new technique to synthesize barium titanate ( $\text{BaTiO}_3$ ) on homogeneous  
5 substrates (titanium) or heterogeneous substrates (silicon wafers, metal, glass, ceramics,  
polymers, other metals, etc.) is disclosed to include a first step to deposit a titanium  
film on a substrate by sputtering, and a second step to synthesize barium titanate film  
with uniformly dispersed spherical particles on the titanium-coated substrate in a  
electrolyte containing barium ions by electrochemically anodic oxidation.